

**Amendments to the Claims:**

Please cancel claims 1 through 12, and 32 through 68, without prejudice to the filing of one or more divisional applications including same. In addition, please cancel claim 15 and claim 22.

Claims 13, 14, 16-21, 23 through 31 have been amended herein. Claims 69 through 80 have been added.

Please note that all claims currently pending and under consideration in the referenced application are shown below. Please enter these claims as amended. This listing of claims will replace all prior versions and listings of the claims in the application.

**Listing of Claims:**

Claims 1-12 (Canceled).

13. (Currently Amended) A method of forming at least one conductive traces trace on  
within an pipeline interior surface of a pipe, comprising:  
disposing a movable spray gun within an interior of a pipe;  
generating a reduced air pressure zone proximate the spray gun wherein the reduced air pressure  
zone is movable with the spray gun;  
spraying, via the movable spray gun, a conductive material toward an interior surface of the pipe  
while moving the movable spray gun in relation thereto and generating the reduced air  
pressure zone proximate the spray gun to form at least one conductive traceddepositing and  
consolidating a substantially continuous elongated conductive layer of a conductive  
material upon an interior surface of a pipe to form a conductive trace.

14. (Currently Amended) The method according to claim 13, further comprising  
spraying, via the movable spray gun, an insulative material toward an interior surface of the pipe

while moving the movable spray gun in relation thereto and generating the reduced air pressure zone proximate the spray gun to form depositing and consolidating an insulating layer of an insulating material upon ~~an~~ the interior surface of ~~a~~ the pipe prior to depositing spraying said the conductive layer material and then depositing said conductive layer over said insulating layer.

15. (Cancelled)

16. (Currently Amended) The method according to claim 1514, wherein spraying the insulating material comprises:

mounting the movable spray gun placing a spray gun configured to spray said insulating material on to an extension arm; and  
inserting said the extension arm at least partially into said the interior of the pipe area; and  
operating said spray gun to spray said insulating material.

17. (Currently Amended) The method according to claim 16, further comprisingwherein providing generating the a volume zone of reduced air pressure adjacent the spray gun said extension arm to draw any overspray of said insulating material from said interior area  
comprises drawing overspray of the insulating material in a direction generally opposite to the direction of spraying.

18. (Currently Amended) The method according to claim 1716, wherein providinggenerating said the volume zone of reduced air pressure adjacent said the extension arm  
spray gun comprises disposing transporting overspray through the extension arm a reduced pressure zone proximate said spray gun.

19. (Currently Amended) The method according to claim 16, wherein placing providing a spray gun comprises placing providing a thermal spray gun.

20. (Currently Amended) The method according to claim 19, further comprising

cooling ~~said~~the thermal spray gun.

21. (Currently Amended) The method according to claim +920, further comprising cooling ~~said~~the extension arm separately from ~~said~~the thermal spray gun.

22. (Cancelled)

23. (Currently Amended) The method according to claim 2213, wherein spraying ~~said~~the conductive material comprises:

~~mounting the movable spray gun~~ attaching a spray gun configured to spray ~~said~~ conductive material on an extension arm; and  
inserting ~~said~~the extension arm at least partially into ~~said~~the interior area of the pipe; and  
operating ~~said~~ spray gun to spray ~~said~~ conductive material.

24. (Currently Amended) The method according to claim 23, further comprising ~~wherein generating providing an a zone~~ area of reduced air pressure adjacent ~~said~~the extension arm ~~spray gun~~ comprises to draw any overspray of ~~said~~ conductive material from ~~said~~ interior area ~~drawing overspray of the conductive material in a direction generally opposite to the direction of spraying~~.

25. (Currently Amended) The method according to claim 24, wherein ~~providing generating~~ ~~said~~ the volume ~~zone~~ of reduced air pressure adjacent ~~said~~ the extension arm ~~spray gun~~ comprises ~~transporting overspray through the extension arm~~ ~~disposing a reduced air pressure zone proximate~~ ~~said spray gun~~.

26. (Currently Amended) The method according to claim 23, wherein ~~attaching providing~~ a spray gun comprises ~~attaching providing~~ a thermal spray gun.

27. (Currently Amended) The method according to claim 26, further comprising

cooling ~~said~~~~the~~ thermal spray gun.

28. (Currently Amended) The method according to claim 27, further comprising cooling ~~said~~~~the~~ extension arm separately from ~~said~~~~the~~ thermal spray gun.

29. (Currently Amended) The method according to claim 13, further comprising flushing ~~said~~~~the~~ interior area of the pipe with cooling air.

30. (Currently Amended) The method according to claim 29, further comprising directing ~~said~~~~the~~ cooling air into ~~said~~~~the~~ interior area of the pipe from at least one cooling air outlet disposed on ~~said~~~~the~~ extension arm.

31. (Currently Amended) The method according to claim 29, further comprising directing ~~said~~~~the~~ cooling air into ~~said~~~~the~~ interior area of the pipe from an opening open end of into ~~said~~~~the~~ pipe.

Claims 32-68 (Canceled)

69. (New) The method according to claim 16, further comprising rotating the pipe while spraying the insulative material.

70. (New) The method according to claim 16, further comprising measuring a position of the spray gun in relation to the interior surface of the pipe while spraying the insulative material.

71. (New) The method according to claim 70, further comprising controlling the position of the spray gun responsive to measuring the position.

72. (New) The method according to claim 16, further comprising measuring the thickness of the insulative layer while spraying the insulative material.

73. (New) The method according to claim 23, further comprising rotating the pipe while spraying the conductive material.

74. (New) The method according to claim 23, further comprising measuring the position of the spray gun in relation to the interior surface of the pipe while spraying the conductive material.

75. (New) The method according to claim 23, further comprising measuring the thickness of the conductive material while spraying the conductive material.

76. (New) The method according to claim 29, wherein flushing the interior of the pipe with cooling air comprises introducing atomized water into the interior of the pipe, the atomized water carried by the cooling air.

77. (New) The method according to claim 23, further comprising spraying an insulative layer over the at least one conductive trace.

78. (New) The method according to claim 14, wherein spraying a conductive material toward an interior surface of the pipe to form at least one conductive trace comprises spraying a conductive material toward an interior surface of the pipe to form a plurality of conductive traces.

79. (New) The method according to claim 78, wherein spraying a conductive material toward an interior surface of the pipe to form a plurality of conductive traces comprises forming each of the plurality of conductive traces upon the insulative layer.

80. (New) The method according to claim 78, wherein:  
forming an insulative layer comprises forming a plurality of separate insulative layer segments;  
and  
spraying a conductive material toward an interior surface of the pipe to form a plurality of conductive traces comprises forming a respective one of the plurality of conductive traces onto each of the plurality of separate insulative layer segments.